

ferromagnetic layer is disposed between the first ferromagnetic layer and the nonmagnetic high-conductivity layer; and

an suspension arm holding the magnetoresistance effect head.

36. A hard disk drive system, comprising

a magnetic medium, and

a magnetic head assembly, comprising

a magnetoresistance effect head for reproducing magnetic signal field from the magnetic medium, having a nonmagnetic spacer layer,

first and second ferromagnetic layers separated by the nonmagnetic spacer layer, the first ferromagnetic layer having a magnetization direction at an angle relative to a magnetization direction of the second ferromagnetic layer at zero applied magnetic field, the second ferromagnetic layer comprising first and second ferromagnetic films antiferromagnetically coupled to one another and an antiferromagnetically coupling film located between and in contact with the first and second ferromagnetic films for coupling the first and second ferromagnetic films together antiferromagnetically so that their magnetizations are aligned antiparallel with one another and remain antiparallel in the presence of an applied magnetic field, the magnetization of the first ferromagnetic layer freely rotate in a magnetic field signal, and the magnetoresistance effect head also

including a nonmagnetic high-conductivity layer disposed in contact with the first ferromagnetic layer so that the first ferromagnetic layer is disposed between the nonmagnetic spacer layer and the nonmagnetic high-conductivity layer; and a suspension arm holding the magnetoresistance effect head so that the magnetoresistance effect head is disposed on or above the magnetic medium.